Public Notice

Public Notice No. 200300322	Date: **November 4, 2003**
Reply to: Regulatory Branch (CEPOH-EC-R/P. Lennan) U.S. Army Engineer District, Honolulu Building 230 Fort Shafter, Hawaii 96858-5440	Respond by: **December 5, 2003**

U.S. Army Corps of Engineers
Honolulu District

PN200300322
KONA BLUE WATER FARMS OFF
UNUALOHA POINT, KONA, HAWAII

1. APPLICANT: Black Pearls, Inc./Kona Blue Water Farms, P.O. Box 525, Holualoa, Hawaii 96725

2. APPLICABLE STATUTORY AUTHORITY: Section 10 of the River and Harbor Act of 1899 (33 U.S.C. 403).

3. LOCATION OF PROPOSED ACTIVITY: The activity is proposed for a site 2,600 feet off-shore and approximately one mile north of Keahole Point and southwest of Unualoha Point, Kona, Hawaii (Figures 1,2,3).

4. PROJECT PURPOSE AND DESCRIPTION: The purpose of the project is to build and operate an aquaculture farm for various local fish species.

The farm is proposed to be located at a site approximately 2,600 feet off-shore of Unualoha Point. The farm site would occupy about 90 acres. Water depth at the site varies between 200 and 220 feet and most of the substrate is medium to course sand.

The applicant proposes to place up to six submersible cages for grow-out and two small surface cages to be used for nursery rearing and for harvesting fish from the submersible cages. The submersible cages would be Sea Station net pens, manufactured by Net Systems, Inc. of Bainbridge Island, Washington. The pens are about 80 feet wide and 60 feet tall, with a bi-conical shape. When deployed, the top of the pen would be about 25 feet below the surface of the water. The pen uses Spectra mesh, an extremely strong, UV resistant synthetic material. The anchoring system requires a scope of

4 to 1 and will use heavy Danforth anchors, concrete blocks and heavy chain, with submerged floats to keep tension on the lines (Figures 5,6). The two small surface net pens would be about 45 feet in diameter. They would be anchored using concrete blocks and/or Danforth anchors and a series of weights and floats to keep the lines taut (Figure 7). Species currently being considered for farming include *Seriola dumerili*, *Coryphaena hippurus*, *Pristipomoides filamentosus*, *Etelis carbunculus*, *E. coruscans*, *Epiniphelus quernus* and *E. lanceolatus*.

5. IMPACTS OF THE PROPOSED ACTIVITIES IF AUTHORIZED:

Unavoidable impacts of the proposed project would include temporary increases in nutrients in the immediate area of the cages. In addition, it is likely there will be some change in the community structure of the fauna below the cages. The cages will also act as a fish-aggregating device (FAD), with herbivorous fishes grazing on the algae growing on the cages and anchors, and carnivorous fishes seeking prey. The cages will be a slight impediment to navigation through the area, but this area is not a major sea-lane or fishing area. If a permit is issued for this project, it will be conditioned to require cages and anchors to be removed from the ocean if the fish farm ceases operation.

6. IMPACT ON HISTORIC PROPERTIES:

No significant cultural or archaeological resources are known to exist within the proposed farm area. Water depth at the site is 200-220 feet so it is unlikely that any structures would be located there. The applicant has had meetings with local Hawaiian elders (kupuna) to determine if any areas of cultural significance are located in the immediate vicinity of the farm area. The only areas identified were the 'opelu ko'a (schooling places for mackerel scad-*Decapterus macarellus*). These ko'a are well shoreward of the proposed farm site, generally at depths of 120 feet or less, near reef areas. In the event that unanticipated or inadvertent discovery of historic properties occur during project execution, all work shall be stopped and the State Historic Preservation Office will be notified. This is a general condition that will be included in the Department of Army permit.

This notice has been sent to the State Historic Preservation Officer, the State Office of Hawaiian Affairs and Hui Malama I Na Kupuna. Any additional comments they have regarding historic properties and cultural resources will be considered before a final decision is made on the permit.

7. IMPACT ON ENDANGERED SPECIES: The project will likely not have any significant effect on any proposed, candidate or listed threatened or endangered species, although the proposed farm site is located within the Hawaiian Islands Humpback Whale National Marine Sanctuary. There is a pod of Spinner Dolphins which migrate up and down the coast, but are generally closer to shore than the proposed farm location. Because the cages and their mooring lines are always under tension, the potential for marine animals to become entangled is very low. This notice is being sent to the U.S. Fish and Wildlife Service, the National Marine Fisheries Service and the Hawaiian Islands Humpback Whale National Marine Sanctuary. Any additional comments they have concerning potential impacts to protected species will be considered before a final decision is made on the permit.

8. ESSENTIAL FISH HABITAT: No adverse impact to essential fish habitat is expected. This notice has been sent to the National Marine Fisheries Service. Any comments they have will be considered before a final decision is made on the permit.

9. OTHER GOVERNMENT AUTHORIZATIONS/CERTIFICATIONS:

A Coastal Zone Management Federal Consistency Determination will be required from the State of Hawaii Office of Planning, Coastal Zone Management Program prior to issuance of a Department of the Army permit for this activity.

10. EVALUATION FACTORS: The decision to issue the permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including conservation, economics, aesthetics, general environmental concerns, historic values, fish and wildlife values, flood damage prevention, land use, navigation, recreation, water supply, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people.

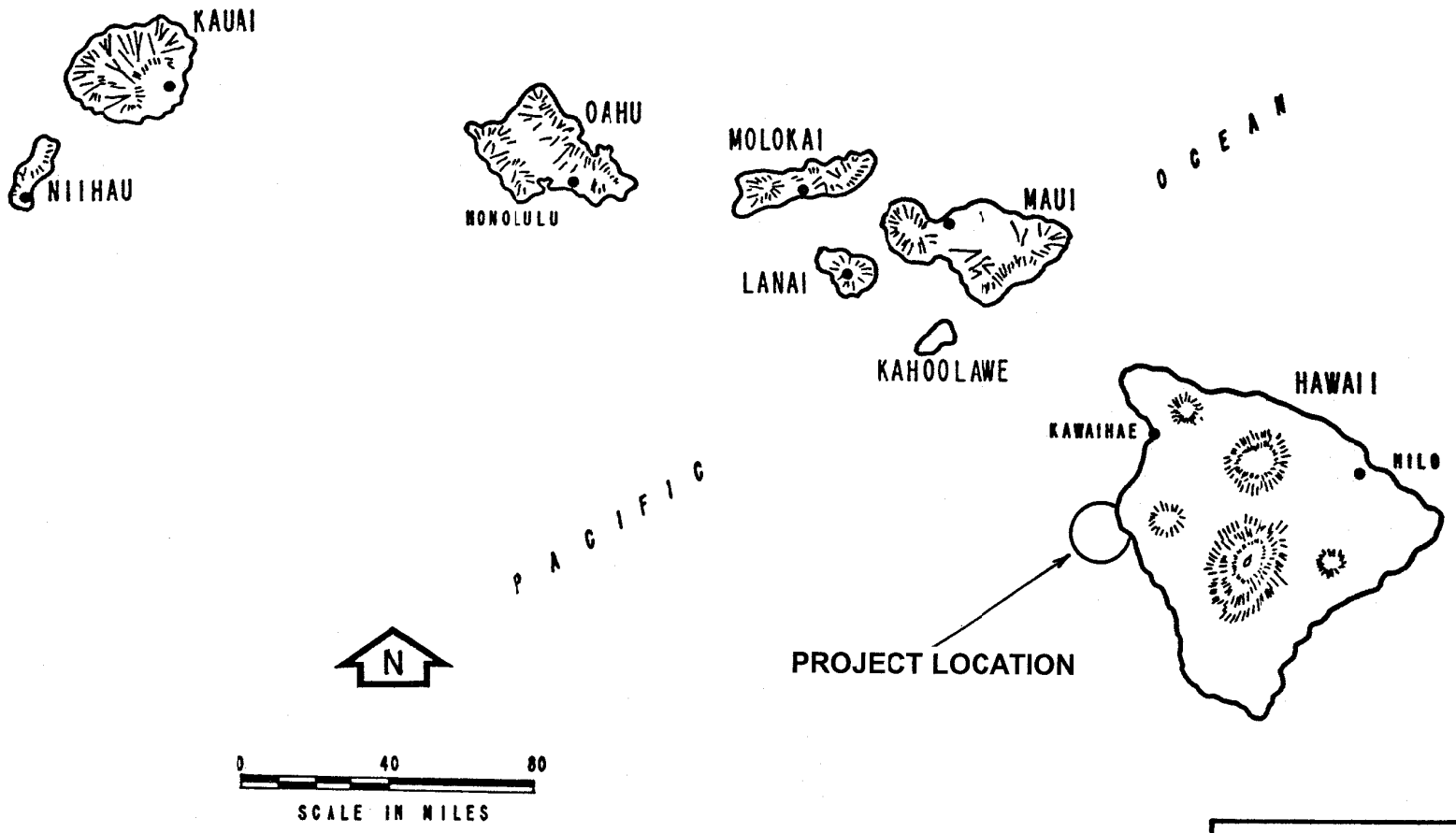
11. COMMENTS AND INQUIRIES: Recipients of this Public Notice or other interested parties may submit in writing any comments that they have on the proposed issue of the permit. Comments or written inquiries may be sent by FAX to (808)

438-4060, or by mail to the address above. Comments must reach this District no later than 30 days from the date of this notice. Written inquiries and comments should refer to Public Notice number 200300506. Further information may also be obtained from William Lennan, telephone (808) 438-6986. This Public Notice is posted on the Honolulu District web site at "http://www.pod.usace.army.mil/news/Public Notices.html."

12. REQUEST FOR PUBLIC HEARING:

Any person may request, in writing, within 30 days from the date of this notice that a public hearing be held to consider the proposed permit issue. Requests for public hearing shall state clearly and concisely the reasons and rationale for holding a public hearing.

Figure 1. Vicinity Map
Figure 2. Proposed Offshore Farm Lease Site
Figure 3. Proposed Offshore Fish Farm Site and Primary Fishing Areas
Figure 4. Movements of Spinner Dolphins.
Figure 5. Submerged Cages Anchoring System
Figure 6. Submerged Cages Anchoring Grid
Figure 7. Typical Surface Pen Anchoring System



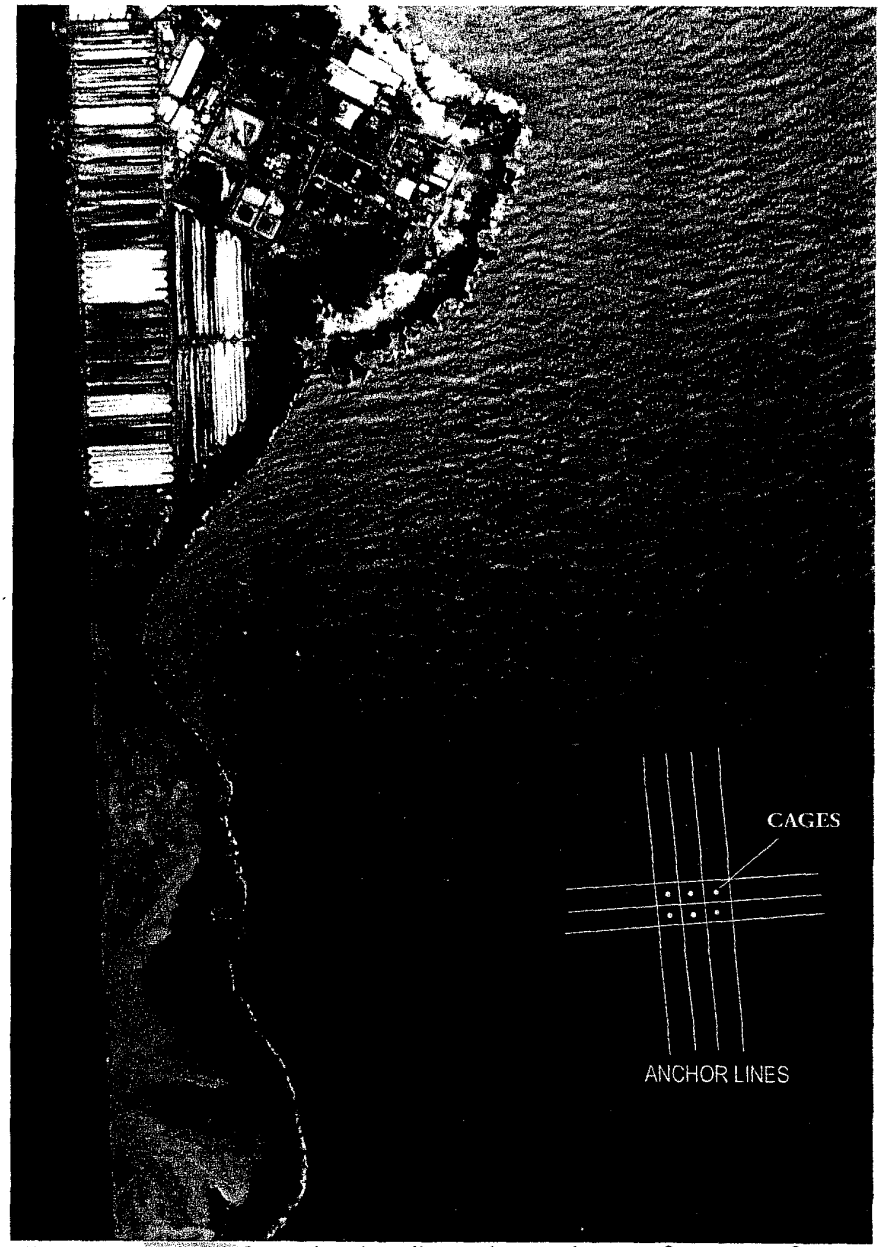
VICINITY MAP

Figure 1

U.S. ARMY ENGINEER DISTRICT, HONOLULU

Figure 2 Proposed offshore farm lease site.

The proposed farm site lies south-west of Unualoha Point, in waters between 200 – 220 ft deep.



The cages will be over 2600 ft from the shoreline. The total area of water surface covered by the proposed Farm Lease Area is approximately 36.5 hectares, or 90 acres. Most of this area would contain the anchor lines (shown below as dotted lines), which require a scope of around 4:1 (480 to 680 ft long, if the anchors are attached at a point on the cages 25-30 ft beneath the surface).

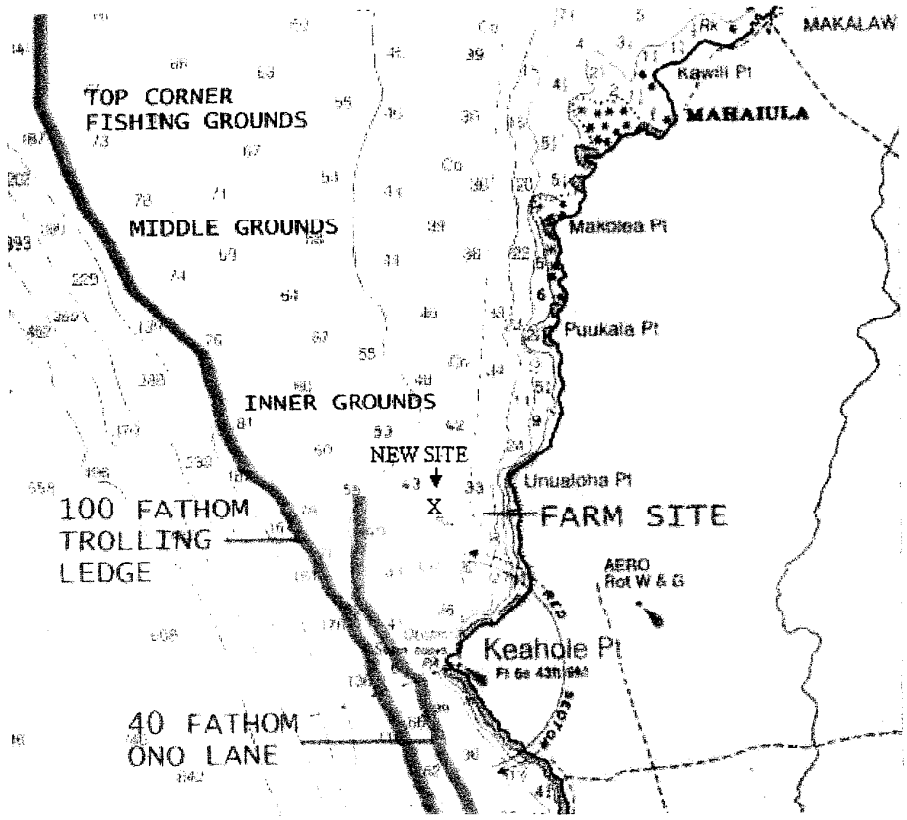
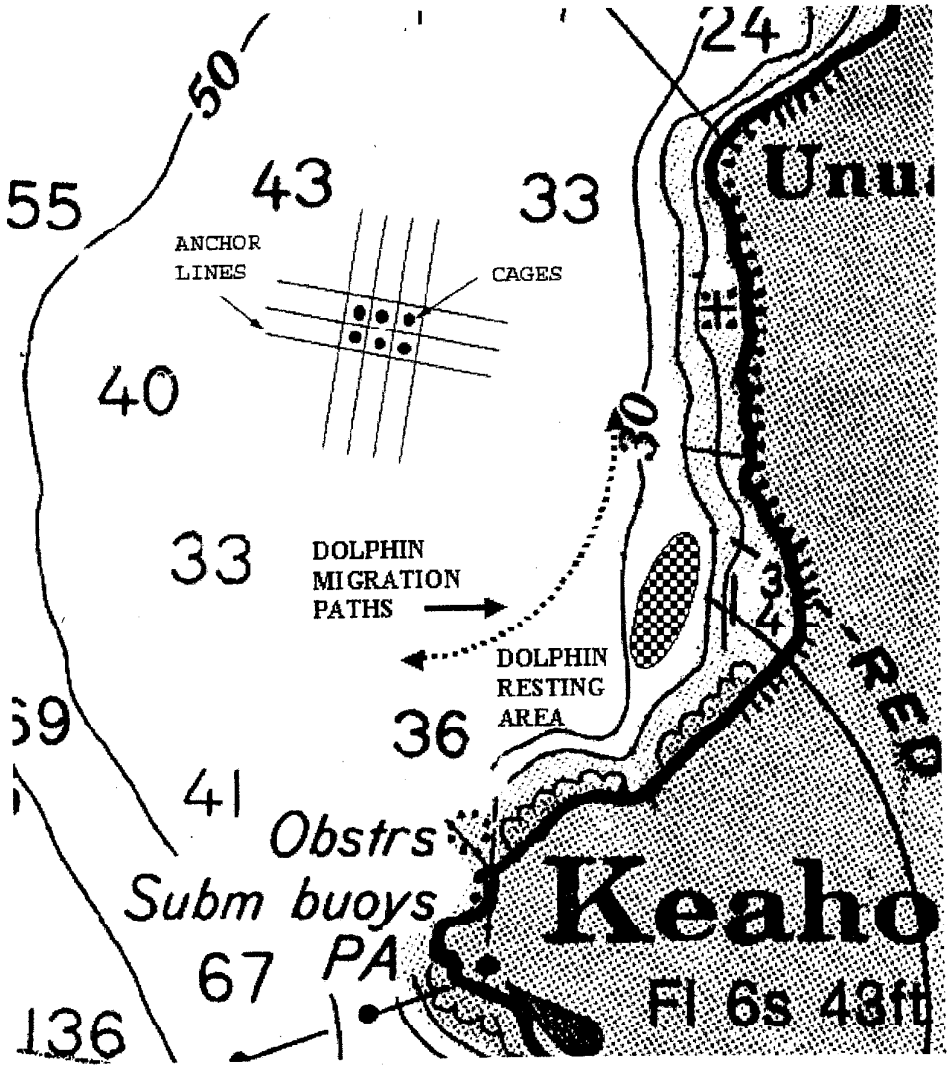


Figure 3 Proposed offshore fish farm site and primary fishing areas

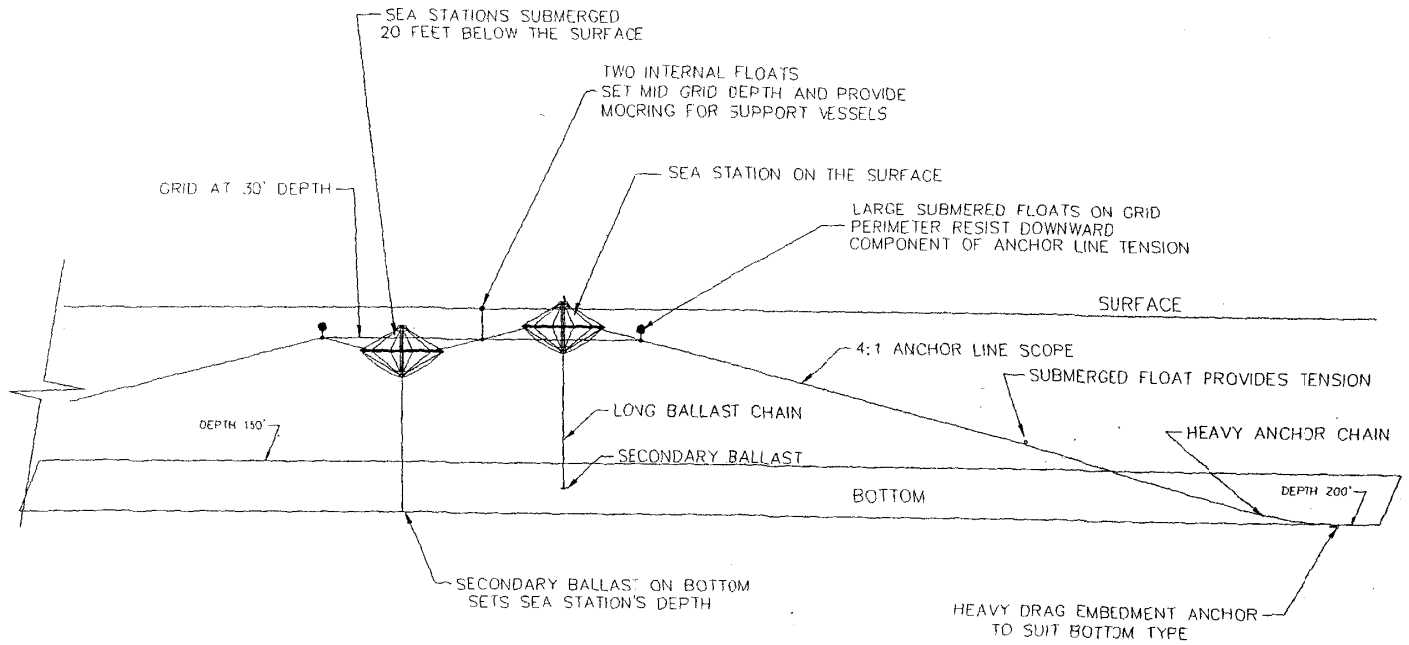
The site is well inside of both the 100 fathom (200 m) trolling ledge along the "grounds" offshore of Keahole Point, and the 40 fathom (80 m) ono lane. Reef fishing and 'opelu ko'a are found well inshore of the proposed site, along the edge of the reef, in waters up to 120 feet deep (40 m). Fishing grounds for 'opelu at night are usually deeper than 40 fathoms (80 m).

Figure 4 Movements of spinner dolphins

The migration by spinner dolphins (*Stenella longirostris*) through the area suggests that the farm will not interfere in any significant manner with the animals' movements. *As the farm has now been relocated a further 600 ft to the west (offshore), resting dolphins will now no longer have any overlap, even with the unoccupied SE corner of the lease area (Jan Ostman-Lind, pers. comm.). Resting dolphins will not come within 600 ft of mooring lines or anchors, and will be at least 1,200 ft from the net cages under the present farm mooring design.*



REVISION	DATE	COMMENTS



ELEVATION

NORTH

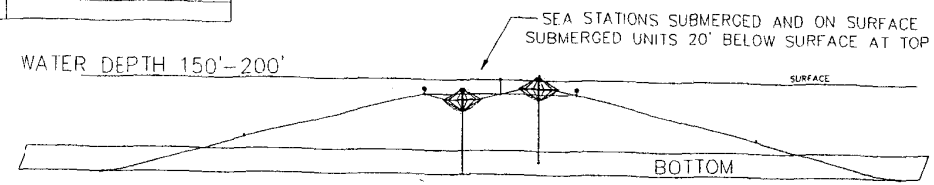
Figure 5

PREVAILING CURRENT

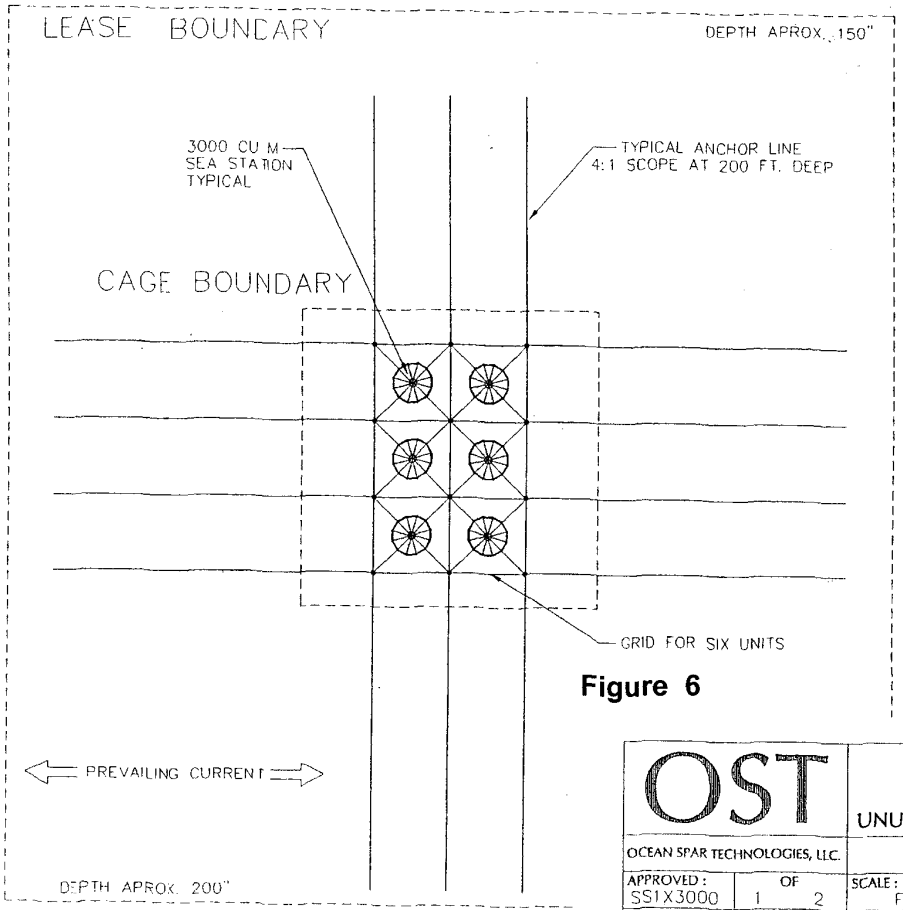
OST	**SUBMERGED CAGES ANCHORING SYSTEM** UNUALOHA POINT, NORTH KONA, HAWAII				
OCEAN SPAR TECHNOLOGIES, LLC.	KONA BLUE WATER FARMS				
APPROVED: KONABLUE OF 2 2	SCALE: FIT	DATE: 10-22-02	DRAWN BY: KTS	DESIGNED BY: KTS	

OST-7906 N.E. DAY ROAD WEST - BAINBRIDGE ISLAND, WA 98110 - USA - PH. 1 (206) 780-1145 FX. 1(206) 780-1243

REVISION	DATE	COMMENTS
25	06/97	VOLUME NET



ELEVATION



NORTH

Figure 6

FARM OVERVIEW

OST	**SUBMERGED CAGES ANCHORING GRID** UNUALOHA POINT, NORTH KONA, HAWAII				
OCEAN SPAR TECHNOLOGIES, LLC.	KONA BLUE WATER FARMS				
APPROVED: SS1X3000	OF 1 2	SCALE: FIT	DATE: 10-22-02	DRAWN BY: GFL	DESIGNED BY: GFL

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Figure 7 Typical net pen anchoring arrays (continued)

Two small surface cages will be needed for nursery rearing and for harvesting from the submersible cages. These will be less than 50 feet in diameter. This figure shows a typical surface net pen array.